



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,393	09/18/2001	Susumu Senshu	450100-03492	1210
20999	7590	12/01/2004	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			KIM, KYUNG DONG	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,393

Applicant(s)

SENSHU, SUSUMU

Examiner

Kyung Kim

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed.

Drawings

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 16 – 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16 - 20 recite the limitation "said modulating means modulates said first data" in independent claim 16. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "said first data" in paragraph 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "said first data" in paragraph 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2652

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 23 - 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Narahara.

Regarding claim 23:

Narahara discloses of an optical disk including a first area which is both readable and writable and a second area which is only readable (col. 4, lines 19-33: recording/reproducing area, and reproduction-dedicated area, respectively), wherein data to be recorded in said first area is recorded on the basis of a signal modulated by a first modulating method (col. 8, lines 41-49: RLL(1,7) for data to be recorded in area AR1); and data to be recorded in said second area is recorded on the basis of a signal modulated by a second modulating method different from said first modulating method (col. 8, lines 41-49: RLL(2,7) for data to be recorded in area AR2).

Regarding claim 24:

Narahara discloses of an optical disk playback apparatus for reproducing data recorded on an optical disk including a first area which is both readable and writable and a second area which is only readable (col. 4, lines 19-33: recording/reproducing area, and reproduction-dedicated area, respectively);

said optical disk playback apparatus comprising; a first demodulating means for demodulating data recorded in said first area by a first demodulating method (col. 8, lines 41-49: RLL(1,7) for data to be recorded in area AR1, see fig. 5 demodulator 25); and a second demodulating means for demodulating data recorded in said second area by a second

Art Unit: 2652

demodulating method different from said first demodulating method (col. 8, lines 41-49: RLL(2,7) for data to be recorded in area AR2, see fig. 5 demodulator 26).

Regarding claim 25:

Claim 25 includes method limitations corresponding to the apparatus of claim 24, rejected above. Claim 25 is rejected for reasons similar to the reasons for the rejection of claim 24 above.

Regarding claim 26:

Claim 26 is drawn to a recording medium for recording a computer readable program for an optical disk playback apparatus according claim 24, rejected above. Narahara also discloses of a recording medium for recording a computer readable program for an optical disk playback apparatus (fig. 9, CPU 202, it is understood that a CPU contains a recording medium for recording a computer readable program such as an EEPROM to perform the disclosed process for reproduction.).

Regarding claim 27:

Narahara discloses of an optical disk recording apparatus for recording data on an optical disk including a first area which is both readable and writable and a second area which is only readable (col. 4, lines 19-33: recording/reproducing area, and reproduction-dedicated area, respectively) and has data prerecorded on the basis of a signal modulated by a first modulating method (col. 7, lines 42-57; modulated by RLL(2,7) col. 8, lines 35-40);

said optical disk recording apparatus comprising modulating unit (fig. 9: modulation block 208) for modulating said data by a modulation method different from said first modulating method (col. 8, lines 35-40: RLL(1,7) for user data).

and recording unit for recording said data in said first area on the basis of a signal modulated by said modulating unit (col. 8, lines 35-40: recording user data in area AR1).

Regarding claim 28:

Claim 28 includes method limitations corresponding to the apparatus of claim 27. Claim 28 is rejected for reasons similar to the rejection of claim 27.

Regarding claim 29:

Claim 29 is drawn to a recording medium for recording a computer readable program for an optical disk playback apparatus according claim 27, rejected above. Narahara also discloses of a recording medium for recording a computer readable program for an optical disk playback apparatus (fig. 9, CPU 202, it is understood that a CPU contains a recording medium for recording a computer readable program such as an EEPROM to perform the disclosed process for recording.).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 6 – 10, 16, and 18 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable by Koishi in view of Narahara.

Koishi discloses of an optical disk comprising: a first area which is both readable and writable (col. 7, lines 29-33); and a second area which is only readable (col. 7, lines 29-33); wherein first data to be recorded in said first area is recorded by a recording method and a

Art Unit: 2652

modulating method (fig. 1; col. 7, lines 45-50, user data); second data to be recorded in said first area is recorded by a recording method and a modulating method (col. 7, lines 45-50, header); and third data to be recorded in said second area is recorded by recording method and modulating method (col. 7, lines 50-55, header).

Koishi does not but Narahara does disclose that the recording method for the first data and recording method for the second data are different (magneto-optical or phase-change for user data: col. 3, lines 25-45; pit string for headers: col. 7, lines 42-48). It is understood that Narahara's headers are for use on recordable optical discs of different recording formats for user data disclosed in the Background of the Invention.

It would have been obvious for a person of ordinary skill in the art at the time of the invention to take the disk as taught by Koishi and apply Narahara's different recording methods, the motivation being in order to produce an optical disc with high yield or to reduce PLL pull-in time at clock generation (Narahara: col. 13, lines 43-46 and lines 57-60).

Koishi does not but Narahara does disclose that the modulation method for the first data and the modulation method for the second data are different (col. 8, lines 35-41).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to take the disk as taught by Koishi and apply Narahara's different modulation methods, the motivation being in order to have minimum run-length for the header/address area longer than the minimum run-length for the user data (Narahara: col. 9, lines 21-30).

Regarding claim 6:

Koishi and Narahara include the features of dependent claim 6. Koishi discloses an optical disk wherein the first area includes a third area (fig. 2A) for recording fourth data (fig.

Art Unit: 2652

2A: dummy data in VFOb/VFOa region 15) necessary for recording and reproducing first data by a cluster unit (col. 9, lines 15-20); and said second data is recorded in said second area (dummy data is written in both a recordable area [fig. 2A: VFOa/VFOb] and a read-only area [fig. 2B: VFO1]; col. 10, lines 40-43), while said third data is recorded over an entire area where said second data is not recorded (fig. 2b: the remainder of the header in the read-only area is recorded over the entire area that VFO1 is not recorded).

Regarding claim 7:

Koishi and Narahara include the features of dependent claim 6. Koishi discloses an optical disk wherein the first area includes a third area (fig. 2A) for recording fourth data (fig. 2A: dummy data in VFOb/VFOa region 15) necessary for recording and reproducing first data over a plurality of segments (col. 9, lines 15-20); and said second data is recorded in said second area (dummy data is written in both a recordable area [fig. 2A: VFOa/VFOb] and a read-only area [fig. 2B: VFO1]; col. 10, lines 40-43), while said third data is recorded over an entire area where said second data is not recorded (fig. 2b: the remainder of the header in the read-only area is recorded over the entire area that VFO1 is not recorded).

Regarding claim 8:

Koishi and Narahara include the features of dependent claim 8. Narahara discloses that the first data modulating method is RLL (1, 7) modulation and the second data modulating method is RLL (2, 7) modulation (col. 8, lines 35-41).

Regarding claim 9:

Art Unit: 2652

Koishi and Narahara include the features of dependent claim 9. Narahara discloses that the first data recording method is a recording using phase change (col. 3, lines 25-45); and that the second data recording method is a recording method using a pit (col. 7, lines 42-48).

Regarding claim 10:

Koishi and Narahara include the features of dependent claim 10. Narahara discloses that the first data recording method is a recording using magneto-optical recording (col. 3, lines 25-45); and said second recording method is a recording method using a pit (col. 7, lines 42-48).

Regarding claim 16:

Koishi discloses of an optical disk recording apparatus for recording data on an optical disk including: a first area which is both readable and writable (col. 7, lines 29-33); and a second area which is only readable (col. 7, lines 29-33); wherein second data is prerecorded (col. 11, lines 1-10) in said first area is recorded by a first recording method and a first modulating method (col. 7, lines 45-50: header); third data is prerecorded (col. 9, lines 38-40) by said first recording method and said first modulating method (col. 7, lines 50-55: header).

Koishi does not disclose, but Narahara does disclose said modulating means modulates said first data by second modulating method different from said first modulating method (col. 8, lines 35-41).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to take the disk as taught by Koishi and apply Narahara's different modulation methods, the motivation being in order to have minimum run-length in the second area longer than the minimum run-length in the first area (Narahara: col. 9, lines 21-30).

Art Unit: 2652

Koishi does not but Narahara does disclose that the recording method for the first data and recording method for the second data are different (magneto-optical or phase-change for user data: col. 3, lines 25-45; pit string for headers: col. 7, lines 42-48). It is understood that Narahara's headers are for use on recordable optical discs of different recording formats for user data disclosed in the Background of the Invention.

It would have been obvious for a person of ordinary skill in the art at the time of the invention to take the disk as taught by Koishi and apply Narahara's different recording methods, the motivation being in order to produce an optical disc with high yield or to reduce PLL pull-in time at clock generation (Narahara: col. 13, lines 43-46 and lines 57-60).

Regarding claim 18:

Koishi and Narahara include the features of claim 18. Narahara discloses of a first modulating method is an RLL (2, 7) modulation and second modulation method is an RLL (1, 7) modulation (col. 8, lines 35-41).

Regarding claim 19:

Koishi and Narahara include the features of claim 19. Narahara discloses that the first recording method that is a recording using a pit (col. 7, lines 42-48); and said second recording method is a recording method using phase change (col. 3, lines 25-45).

Regarding claim 20:

Koishi and Narahara include the features of claim 20. Narahara discloses that the first data recording method is a recording using magneto-optical recording (col. 3, lines 25-45); and second data recording method is a recording method using a pit (col. 7, lines 42-48).

Regarding claim 21:

Art Unit: 2652

Koishi and Narahara include the features of claim 21. Claim 21 includes method limitations corresponding to the apparatus of claim 16, rejected above. Claim 21 is rejected for reasons similar to the reasons for the rejection of claim 16.

Regarding claim 22:

Koishi and Narahara include the features of claim 22. Claim 22 includes method limitations corresponding to the apparatus of claim 16, rejected above, but further claims a recording medium for recording a computer readable program for an optical disk recording apparatus. Koishi also discloses of a recording medium for recording a computer readable program for an optical disk recording apparatus (fig. 9, CPU 202, it is understood that a CPU contains a recording medium for recording a computer readable program such as an EEPROM to perform the disclosed process for recording.).

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koishi and Narahara, in view of Kobayashi.

Koishi and Narahara anticipate the limitations of independent claim 1 for the reasons above. Koishi further discloses that said first data to be recorded in said first area has a format that is identical with said third data to be recorded in said second area (fig. 4a; fig 4b; col. 15, lines 23-30).

Koishi and Narahara do not, but Kobayashi does disclose an optical disk wherein data to be recorded in either a read-only (col. 11, lines 63-67: header) or readable and writable area (col. 11, lines 63-67: write/read area) has a predetermined frame structure and a predetermined block structure for error correction (fig. 10; col. 12, lines 28-34).

Art Unit: 2652

It would have been obvious for a person of ordinary skill in the art at the time of the invention to combine the optical disk as taught by Koishi and Narahara, and the frame and block structure of Kobayashi for the purpose of error-correction (Kobayashi: col. 12, lines 28-34).

10. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koishi and Narahara, in view of Takemura.

Regarding claim 3:

Koishi and Narahara anticipates independent claim 1 for the reasons above, but lacks the features of dependent claim 3. However, Takemura discloses of the frame length ratio between an optical disk that is both readable and writable, and an optical disk that is read-only, as a simple ratio of integers (col. 4, lines 28-39: 2418B data of one sector for both read-only DVD and rewritable DVD).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to take the optical disk composed of both a read-only area and a readable and writable area as taught by Koishi and Narahara; and apply Takemura's simple-integer frame-length ratio between the two areas. A person of ordinary skill in the art would have been motivated to do this in order to secure compatibility between the two areas (Takemura, col. 4, lines 28-30).

Regarding claim 5:

Koishi, Narahara, and Takemura include the features of claim 5. Koishi teaches when b frames of said third data are recordable in a length of a frames of said first data, the frame length of said third data is set such that a value of b/a (fig. 4a; fig 4b; col. 15, lines 23-30) is 1, which is the smallest integer ratio possible.

Art Unit: 2652

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koishi, Narahara, and Takemura, in view of Izumi.

Koishi, Narahara, and Takemura disclose the limitations of base claim 3. Koishi further teaches when b frames of said third data are recordable in a length of a frames of said first data, the frame length of said third data is set such that a value of b/a (fig. 4a; fig 4b; col. 15, lines 23-30) is 1.

Koishi, Narahara and Takemura do not disclose but Izumi does disclose of the recording density c of the first area (col. 3, lines 18-23: magneto-optical recording area) and the recording density d of the second area (col. 3, lines 18-23: pre-formatted recording area) have a ratio c/d of also 1 (col. 3, lines 18-23). Hence, the two ratios are as close together as possible.

It would have been obvious for a person of ordinary skill in the art at the time of the invention to combine the disk as taught by Koishi, Narahara and Takemura; with Koishi's frame ratio for the purpose of common signal processing (Koishi: col. 13, lines 16-25); and with Izumi's recording density ratio to allow for a common synchronous clock generator and data discriminator (Izumi: col. 5, lines 58-61).

12. Claims 11, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koishi, in view of Izumi.

Regarding claim 11:

Koishi discloses an optical disk playback apparatus for reproducing data recorded on an optical disc comprising: a first area which is both readable and writable (col. 7, lines 29-33); and a second area which is only readable (col. 7, lines 29-33); a second demodulating means for demodulating third data recorded in said first area by a second demodulating method on the basis

Art Unit: 2652

of the first said data demodulated by first demodulating means (fig. 3; col. 11, line 10 to col. 12, line 10).

Koishi lacks but Izumi discloses of an optical disk playback apparatus comprising: first demodulating means for demodulating first data recorded in said first area and second data recorded in said second area by a first demodulating method (col. 5, lines 30-40).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to take the apparatus as taught by Koishi and combine it with Izumi's demodulating means in order to have only one synchronous clock generator to reproduce both data (Izumi: col. 5, lines 35-40).

Regarding claim 14:

Claim 14 includes method limitations corresponding to the apparatus of claim 11, rejected above. As such, claim 14 is rejected for reasons similar to the rejection of claim 11.

Regarding claim 15:

Koishi and Izumi disclose all the limitations of claim 15. Claim 15 includes method limitations corresponding to the apparatus of claim 11, rejected above, but further claims a recording medium for recording a computer readable program for an optical disk playback apparatus described in claim 11. However, Koishi also discloses of a recording medium for recording a computer readable program for an optical disk playback apparatus (fig. 9, CPU 202, it is understood that a CPU contains a recording medium for recording a computer readable program such as an EEPROM to perform the disclosed process for reproducing.).

13. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koishi and Izumi, in view of Kobayashi.

Koishi and Izumi disclose the limitations of independent claim 11 rejected above, but lacks the features of claim 12. Kobayashi teaches an error correction means for correcting an error in the data regardless of demodulation method (fig. 10; col. 12, lines 28-34).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to take the optical disk playback apparatus of Koishi, Narahara, and Izumi, and apply Izumi's error-correction means to accurately reproduce data recorded on the optical disk.

14. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koishi and Izumi, in view of Narahara.

Koishi and Izumi disclose the limitations of independent claim 11 rejected above, but lacks the features of claim 13. Claim 13 includes features according to the apparatus of claim 18, rejected above. Narahara discloses of a first modulating method is an RLL (2, 7) modulation and second modulation method is an RLL (1, 7) modulation (col. 8, lines 35-41).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to take the disk as taught by Koishi and Izumi, and further apply Narahara's modulation methods, the motivation being in order to have minimum run-length for pre-format information longer than the minimum run-length of user data (Narahara: col. 9, lines 21-30).

15. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koishi and Narahara, in view of Kobayashi.

Koishi and Narahara disclose the limitations of independent claim 16 rejected above. Koishi further discloses an optical disk recording apparatus as claimed claim 16, wherein said third data is prerecorded in said second area (col. 9, lines 38-40); and said recording means records on said optical disk said first data with a data format for error correction that is identical

Art Unit: 2652

with the data format for error correction of said third data (fig. 4a; fig 4b; col. 15, lines 23-30). Koishi and Narahara do not but Kobayashi does disclose of an optical disk wherein data to be recorded in either a read-only (col. 11, lines 63-67: header) or readable and writable area (col. 11, lines 63-67: write/read area) has a predetermined frame structure and a predetermined block structure for error correction (fig. 10; col. 12, lines 28-34).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to combine the optical disk as taught by Koishi and Narahara, and the frame and block structure of Kobayashi for the purpose of error-correction (Kobayashi: col. 12, lines 28-34).

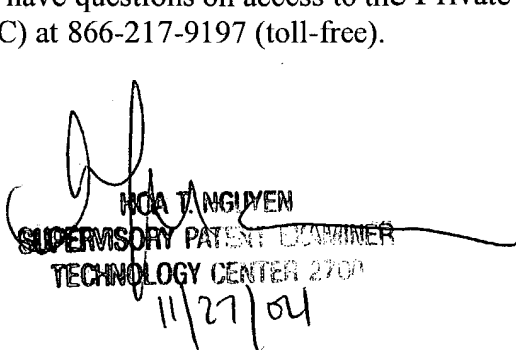
Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung Kim whose telephone number is (703) 308-1554. The examiner can normally be reached on Monday through Friday, 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KDK 10/20/04


HOA T. NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700
11/27/04